

CODE 1 -- OFFENSIVE/URGENT  
 CODE 2 -- DEFENSIVE/URGENT  
 CODE 3 -- OFFENSIVE/NORMAL  
 CODE 4 -- DEFENSIVE/URGENT

DEPARTMENT OF THE ARMY  
 WASHINGTON, D.C. 20315  
 1005115953

APPLICATIONS BEING PREPARED  
 FROM THE PHILIP MORRIS INCORPORATED  
 PRESENT PRIVILEGED AND CONFIDENTIAL  
 DATE 22 NOVEMBER 1978

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\*\*622

CODE 3

:T FIBRILLAR CARBONIZED SMOKING ARTICLE/5-15-73  
 :I N. RAINER AND D. FULL  
 :C SMOKING SUBSTITUTE MATERIALS + CORE MATERIAL  
 :D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS

:A A MODIFIED SMOKING PRODUCT IS PROVIDED THAT COMPRISES A GAS  
 :A PERMEABLE, SELF-SUPPORTING CENTRAL CORE OF A CARBONIZED MATERIAL  
 :A SURROUNDED AND ENVELOPED BY TOBACCO SHREDS AS COMMONLY USED AS  
 :A FILLER IN CIGARETTES. THE CARBONIZED CORE IS PREPARED FROM A  
 :A MULTIFILAMENT STRAND OF A FIBROUS CELLULOSIC SUBSTANCE. THE  
 :A RESULTING SMOKING PRODUCT PROVIDES A REDUCTION IN THE  
 :A DELIVERY OF PARTICULATE MATTER AND A LOWER COST OF FABRICATION.

:S WLKT (KOTHE)/GEI/6-30-78 INVENTORS' COMMENTS ON FIRST DRAFT  
 :S SENT TO WLKT; FILING POSTPONED TO SYNCHRONIZE WITH COMPANION  
 :S APPLICATION, WHICH IS NOW RATED DOUBTFUL--FILING WILL PROCEED.

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\*\*682 :T EXPANSION OF TOBACCO WITH CARBON DIOXIDE HYDRATE/6-2-75  
 CODE 4 :I J. KNIGHT (TRANSFERRED TO MANUFACTURING)  
 :C EXPANSION + CO2  
 :D R&D/BIDMATERIALS SCIENCE GROUP/FARONE/HOELZEL

:A FORMATION OF CARBON DIOXIDE HYDRATE AS THE AGENT WITHIN TOBACCO  
 :A FOR SUBSEQUENT RELEASE OF GAS FOR PUFFING PERMITS OPERATION  
 :A AT LOWER PRESSURES THAN WITH LIQUID CO2.

:S WLKT (KOTHE)/GEI/1-20-78 FIRST DRAFT RETURNED TO WLKT WITH  
 :S CORRECTIONS; 1-27-78 INVENTORSHIP DISCUSSED WITH INSKEEP,  
 :S PALMER, FARONE, HOELZEL, 3-29-78 PROPOSED CLAIMS RECEIVED FOR  
 :S REVIEW--TO INVENTOR; COMPLETION OF INVENTOR'S REVIEW EXPECTED  
 :S BY 10-2-78

\*\*711 :T DIAMMONIUM PHOSPHATE ADDED TO TOBACCO FILLER TO RETARD CIGARETTE  
 CODE 2 :T BURN RATE/11-7-75  
 :I W. GEISZLER, JR. AND W. HOPKINS  
 :C TOBACCO TREATMENT + ADDITIVE  
 :D R&D/NEW CIGARETTE PRODUCTS DIVISION/GANNON/MEYER  
 :S AIP/SEE ALSO PM 746; 7-28-78 MEMO TO GANNON SUGGESTING  
 :S PURSUING

\*\*733 :T LOW TEMPERATURE STEAM EXPANSION OF AMMONIUM CARBONATE IMPREG-  
 CODE 2 :T NATED FILLER/5-6-76  
 :I H. MERRITT AND G. KITE  
 :C EXPANSION + HEAT + CO2  
 :D R&D/MISCELLANEOUS/TOBACCO MATERIALS DEVELOPMENT  
 :D DIVISION/GANNON/BURNS  
 :S WLKT (KOTHE)/GEI/11-7-78 CORRECTIONS FOR 1ST DRAFT SENT TO WLKT

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\*\*734 :T EXPANSION WITH AMMONIUM CARBAMATE/5-6-76  
CODE 1 :I F. UTSCH  
:C EXPANSION + OTHER CHEMICAL + HEAT  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS

:A A METHOD FOR IMPREGNATING TOBACCO WITH AMMONIA AND CARBON  
:A DIOXIDE PREPARATORY TO HEATING FOR PURPOSES OF EXPANSION.  
:A AMMONIUM CARBAMATE POWDER IS MIXED INTIMATELY WITH SHREDDED  
:A TOBACCO AND BULKED AT AMBIENT TEMPERATURE FOR A PERIOD OF TIME  
:A PRIOR TO A HEATING STEP FOR EXPANDING THE TOBACCO. THE USE OF  
:A AMMONIUM CARBAMATE POWDER ALLOWS IMPREGNATION OF THE TOBACCO  
:A WITH VOLATILES IN SITU WITHOUT UNDULY HEATING THE TOBACCO.  
:A BECAUSE OF THE LACK OF APPRECIABLE EXOTHERMIC HEAT INVOLVED  
:A IN BREAKDOWN OF THE AMMONIUM CARBAMATE, ANY FLAVOR LOSS THAT  
:A MAY RESULT FROM HEATING FOR EXTENDED PERIODS IS AVOIDED.

:S WLKT (KOTHE)/GMJS/7-20-78 FIRST DRAFT RECEIVED--TO INVENTOR

\*\*746 :T DAP ADDED TO TOBACCO FILLER CONTAINING EXPANDED TOBACCO TO  
CODE 2 :T RAISE TPM/UNIT WEIGHT/7-27-76  
:I W. GEISZLER, JR. AND W. HOPKINS  
:C TOBACCO TREATMENT + ADDITIVE  
:D R&D/NEW CIGARETTE PRODUCTS DIVISION/GANNON/MEYER

:A A METHOD OF CONTROLLING THE TOTAL PARTICULATE MATTER IN CONTENT  
:A OF SMOKE FROM PYROLYSIS OF A SMOKING PRODUCT CONTAINING AT LEAST  
:A ONE INGREDIENT MADE FROM AN EXPANDED NATURAL PRODUCT. EXPANDED  
:A TOBACCO AS AN INGREDIENT OF A SMOKING FILLER MIXTURE IS TREATED  
:A WITH DIAMMONIUM PHOSPHATE IN DIFFERENT CONCENTRATIONS TO YIELD  
:A DIFFERENT AMOUNTS OF TOTAL PARTICULATE MATTER PER CIGARETTE  
:A DELIVERED TO THE SMOKER.

:S GMJS/SEE ALSO PM 711; 7-28-78 MEMO TO GANNON SUGGESTING  
:S PURSUING; DISCLOSURE BEING PREPARED FOR OUTSIDE FIRM

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\*\*750 :T IMPROVEMENT OF FILLING POWER OF EXPANDED TOBACCO BY HEAT  
CODE 1 :T TREATMENT/9-16-76  
:I L. SYKES AND H. MERRITT  
:C EXPANSION + POST EXPANSION TREATMENT + HEAT  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS

:A TOBACCO ALREADY EXPANDED BY A RAPID HEATING PROCESS UNDERGOES  
:A FURTHER INCREASE IN (REORDERED) FILLING POWER WHEN IT IS GIVEN  
:A AN ADDITIONAL TREATMENT WITH HOT GAS SUCH AS AIR OR STEAM.  
:A THIS TREATMENT CAN BE LESS DRASTIC (I.E., AT A LOWER TEMPERA-  
:A TURE) THAN THE FIRST EXPANSION STEP, AND THUS CAN BE MORE  
:A EASILY CONTROLLED. THE PRODUCT, WHILE HAVING SUBSTANTIALLY  
:A INCREASED FILLING POWER, IS EQUALLY ACCEPTABLE IN SUBJECTIVE  
:A SMOKING TESTS TO THE PRODUCT WITHOUT POST TREATMENT.

:S WLKT (KOTHE)/GEI/10-5-78 COMMENTS ON FIRST DRAFT SENT TO WLKT

\*\*761 :T TOBACCO ROD MAKER CONTROL/12-8-76  
CODE 1 :I J. NIENOW, F. SHERWOOD, C. IRVING, J. OSMALOV, AND T. LASZLO  
:I (RETIRED)  
:C INSTRUMENT + MOISTURE METER  
:D R&D/MISCELLANEOUS

:A IMPROVED CONTROL OF CIGARETTE ROD CHARACTERISTICS IS ATTAINED  
:A BY INTEGRATION OF ROD MASS, FIRMNESS AND MOISTURE CONTENT CHARAC-  
:A TERISTICS IN PROVIDING CONTROL SIGNALS TO TOBACCO FEED APPARATUS.  
:A IN A PREFERRED PRACTICE, A SIGNAL PROCESSOR IS PROVIDED WITH  
:A INPUT INDICATION OF ROD FIRMNESS, MASS AND MOISTURE CONTENT AND  
:A IN TURN CONTROLS THE CUSTOMARY TRIMMER KNIFE AT THE CIGARETTE  
:A MAKER INPUT, TOBACCO FEED BEING REGULATED BY A CONTROL SIGNAL  
:A HAVING CHARACTERISTICS IN ONE PART DIRECTLY PROPORTIONAL TO  
:A FIRMNESS, IN ANOTHER PART DIRECTLY PROPORTIONAL TO MOISTURE  
:A CONTENT AND IN A FURTHER PART BOTH DIRECTLY PROPORTIONAL TO  
:A MOISTURE CONTENT AND INVERSELY PROPORTIONAL TO MASS.

:S GMJS/6-78 FIRST DRAFT DONE BY WLKT; SUSPENDED PENDING FURTHER  
:S DEVELOPMENT OF SYSTEM AND SOFTWARE FOR INCLUSION IN SPECIFICATION

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11765 :T PACKAGE BLANK MEASURING INSTRUMENT/1-19-77  
:I J. BOWLING  
:C INSTRUMENT + PACKAGING  
:D MANUFACTURING ENGINEERING/PASQUINE

:A ACCURATELY MEASURES CUT AND SCORE LOCATIONS OF FLAT PACKAGE  
:A BLANKS.

:S WLKT (BRANDT)/GMJS/11-2-78 FIRST DRAFT RECEIVED--TO INVENTOR

11768 :T TOBACCO FLAVOR-REACTION PRODUCTS/2-14-77  
:I J. SWAIN AND F. CRAYTON  
:C FLAVOR + SYNTHESIS  
:D R&D/FLAVOR DEVELOPMENT DIVISION/GANNON/DAYLOR

:A REACTION PRODUCTS OF FRUCTOSE, AMMONIA, AND FATTY ACIDS TO  
:A FLAVOR TOBACCO.

:S SAH/6-77 PRELIMINARY SEARCH COMPLETED ON PM DATA BASE; SOME PRIOR  
:S ART FOUND; 3-30-78 COMPREHENSIVE SEARCH COMPLETED; EXAMPLES  
:S SUBMITTED BY INVENTORS; 5-78 EVALUATION IN PROGRESS;  
:S 11-78 SPECIFIC EXAMPLES RECEIVED FROM INVENTORS; FIRST DRAFT  
:S BEING PREPARED

11773 :T CO2 IMPREGNATION OF FILLER BY RAPID COOLING/4-25-77  
FILED :I R. DE LA BURDE, P. AUMENT, AND F. UTSCH  
:C EXPANSION + CO2  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS

:A TOBACCO (CUT FILLER) IS PREPARED FOR SUBSEQUENT EXPANSION TREAT-  
:A MENT, AS BY RAPID HEATING, BY IMPREGNATION WITH GASEOUS CARBON  
:A DIOXIDE AT RELATIVELY LOW PRESSURES, SUCH AS 300 PSIG OR LOWER,  
:A AND RAPID COOLING TO SUCH TEMPERATURE THAT THE GAS IS CONDENSED  
:A AND SOLIDIFIED WITHIN THE TOBACCO. PRESSURE IS RELEASED, AND  
:A THE MATERIAL IS EXPANDED IN A CONVENTIONAL WAY.

:S WLKT(GILLIS)/GEI/10-2-78 EXECUTED AND RETURNED TO WLKT FOR FILING

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\*\*774 :T EXPANDED, STIFFENED TOBACCO/4-30-77  
CODE 1 :I N. RAINER AND D. SIWIEC  
:C EXPANSION + OTHER CHEMICAL + STIFFENING  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS

:A TOBACCO STEMS, PREFERABLY BURLEY, ARE TREATED WITH A  
:A CONCENTRATED AQUEOUS SOLUTION OF A DIVALENT SALT OF A METAL  
:A SUCH AS CALCIUM, MAGNESIUM, ZINC, OR ALUMINUM. THE CHLORIDE,  
:A ACETATE, OR NITRATE SALTS OR SAID METALS ARE ACCEPTABLE. THE  
:A SALT IMPREGNATED STEMS ARE THEN TREATED WITH A CONCENTRATED  
:A SOLUTION OF HYDROGEN PEROXIDE AND AMMONIA FOLLOWED BY WASHING  
:A AND DRYING. STEMS TREATED ACCORDING TO THIS PROCESS MAINTAIN  
:A THEIR EXPANDED STATE AND HAVE SIGNIFICANTLY INCREASED FILLING  
:A CAPACITY: FOR EXAMPLE, 150-170 CC OF FILLING VOLUME PER 10  
:A GRAMS OF COMBUSTIBLE MATERIAL VERSUS ABOUT 35 CC PER 10 GRAMS FOR  
:A UNTREATED STEMS.

:S SAH/10-14-77 SEARCH COMPLETED; 7-78 COMPLETION REPORT RECEIVED  
:S FROM INVENTORS

20124 ENG2 (3043) GANNON TO SIWIEC, RAINER  
RE: EXPANDED, STIFFENED TOBACCO  
\*\*775 :T EXPANSION AND/OR FLAVOR ADDITION BY CO2 LIQUID/5-10-77  
CODE 4 :I R. DE LA BURDE AND P. AUMENT  
:C EXPANSION + CO2  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS  
:S WLKT (GILLIS)/GEI/9-13-78 SECOND DRAFT RECEIVED--TO INVENTORS;  
:S AWAITING ADDITIONAL EXAMPLE

\*\*776 :T AIR PERFORATION/5-11-77  
CODE 4 :I W. MUTTER  
:C PAPER + PERFORATING + TIPPING + ROD  
:D R&D/ENGINEERING SERVICES DIVISION/THOMSON/MUTTER  
:S WLKT (DALEY)/GMJS/10-29-77 SEARCH COMPLETED; AWAITING MACHINE  
:S CONSTRUCTION DETAILS

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**\*\*779** :T MEANS TO MEASURE TOBACCO FIRMNESS ON CIGARETTE MAKER/5-25-77  
**CODE 3** :I J. OSMALOV  
:C INSTRUMENT + FIRMNESS OF ROD  
:D R&D/TOBACCO SERVICES DIVISION/GANNON/OSMALOV

:A A CIGARETTE ROD FIRMNESS CONTROL DEVICE HAS A FIRMNESS DETECTOR  
:A HEAD COMPRISING A DIFFERENTIAL TRANSFORMER COUPLED TO A DETECTOR  
:A SHOE, WHICH IS BIASED TOWARD AND RIDES ON A DYNAMICALLY-FLOWING  
:A ROD OF TOBACCO. THE DETECTOR SHOE IS DISPLACED TO AND FROM THE  
:A AXIAL CENTER LINE OF THE TOBACCO ROD IN RESPONSE TO THE FIRMNESS  
:A OF THE ROD, WHICH IS DEPENDENT ON THE RATE OF FLOW OF TOBACCO  
:A INTO THE ROD FORMING GARNITURE. THE TOBACCO FEED RATE INTO THE  
:A ROD FORMING GARNITURE IS INCREASED OR DECREASED IN RESPONSE TO  
:A SIGNALS GENERATED BY THE LEVEL AND THE VARIATIONS OF ROD  
:A FIRMNESS AT THE DETECTOR SHOE TO CONTROL ROD FIRMNESS TO  
:A WITHIN DESIRED LIMITS.

:S GMJS/7-25-78 DRAFT DISCLOSURE COMPLETED--TO INVENTOR; 9-78  
:S CHANGES BEING INCORPORATED INTO DISCLOSURE

**\*\*783** :T MOISTURIZING OF EXPANDED TOBACCO BY WATER SPRAY/7-18-77  
**FILED** :I R. DE LA BURDE, P. AUMENT, AND F. UTSCH  
:C TOBACCO TREATMENT + MOISTENING  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS

:A TOBACCO MATERIAL, WHICH HAS BEEN EXPANDED AND IS IN A VERY DRY  
:A STATE, CAN BE REORDERED RAPIDLY AND WITHOUT LOSS OF BULK BY  
:A SUBJECTION TO A FINE MIST WATER SPRAY, CHARACTERIZED BY DROPLET  
:A SIZE BETWEEN 1 AND 120 MICRONS DIAMETER.

:S WLKT(GILLIS)/GEI/10-24-78 EXECUTED & RETURNED TO WLKT FOR FILING

**\*\*784** :T CONTROL OF MOISTURE IN TOBACCO DURING CIGARETTE MAKING  
**CODE 2** :T 7-25-77  
:I J. OSMALOV  
:C INSTRUMENT + MOISTURE METER  
:D R&D/TOBACCO SERVICES DIVISION/GANNON/OSMALOV

:A A SYSTEM FOR USING THE OUTPUT OF THE BETA GAUGE IN COMBINATION  
:A WITH THE READINGS OF MOISTURE CONTENT OF FILLER IN THE CIGARETTE  
:A ROD TO CONTROL THE ADDITION OR REMOVAL OF MOISTURE IN THE  
:A PNEUMATIC CONVEYING SYSTEM TO THE MAKER OR BY USING A HAUNT  
:A VIBRO UNIT JUST AHEAD OF THE PNEUMATIC SYSTEM.

:S WLKT (DALEY)/GMJS/AWAITING INFORMATION--TESTING IN PROGRESS TO  
:S DEVELOP DATA NEEDED FOR PATENT APPLICATION

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\*\*787 :T USE OF PHENOLIC GLYCOSIDES AS FLAVORANTS IN TOBACCO/9-21-77  
CODE 3 :I E. SANDERS  
:C FLAVOR + RELEASE + SYNTHESIS  
:D R&D/CHEMICAL RESEARCH DIVISION/OSDENE/JOHNSON  
  
:A PHENOLIC GLYCOSIDES USEFUL AS FLAVORANTS IN SMOKING MATERIALS  
:A ARE DISCLOSED. ON PYROLYSIS, THE PHENOL FLAVORANT IS RELEASED TO  
:A FLAVOR THE SMOKE. ADVANTAGEOUS IN THAT THE COMPOUNDS ARE  
:A ODORLESS AND REDUCE PACK AROMA.  
  
:S D&O/SAH/9-19-78 DISCLOSURE SEND TO DEPAOLI & O'BRIEN FOR  
:S EVALUATION AND APPLICATION PREPARATION; 10-6 SEARCH RECEIVED  
:S FROM D&O

\*\*791 :T EXPANSION PROCESS FOR UNCURED TOBACCO/10-14-77  
CODE 3 :I N. RAINER, G. BOKELMAN, AND J. HEARN  
:C EXPANSION + OTHER CHEMICAL + HEAT + HLC  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS  
  
:A HOMOGENIZED GREEN TOBACCO LEAF AND/OR STEM ARE INCUBATED AT  
:A ABOUT 40 DEGREES C FOR 20 HOURS IN THE PRESENCE OF A FLOW OF  
:A AIR. THE HOMOGENIZED LEAF CURED (HEREINAFTER HLC) IS THEN  
:A TREATED WITH AN ALKALINE HYDROGEN PEROXIDE SOLUTION FOLLOWED BY  
:A WASHING. THE EXPANDED HLC IS ROASTED AT ABOUT 200 DEGREES C  
:A TO ACHIEVE A 5% WEIGHT LOSS. THE RESULTANT HLC HAS A SIGNIFI-  
:A CANTLY INCREASED FILLING CAPACITY, IMPROVED APPEARANCE, AND  
:A SMOKING QUALITIES.  
SWIFT  
:S SAH/RELATED TO PM 797 AND 774; 11-77 SEARCH COMPLETED; 7-78  
:S COMPLETION REPORT RECEIVED FROM INVENTORS

\*\*797 :T PROCESS FOR INCREASING THE FILLING POWER OF TOBACCO STEM MATERIAL  
CODE 3 :T 10-28-77  
:I N. RAINER AND J. HEARN  
:C EXPANSION + OTHER CHEMICAL + HEAT  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS  
  
:A RKS TREATED WITH OZONE FOLLOWED BY TREATMENT WITH ALKALINE  
:A HYDROGEN PEROXIDE TO EFFECT EXPANSION. STEMS ARE THEN ROASTED TO  
:A OBTAIN 3 TO 75 WEIGHT LOSS.  
  
:S SAH/RELATED TO PM 791 AND 774; SEARCH COMPLETED; 7-78 COMPLETION  
:S REPORT RECEIVED FROM INVENTORS

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\*\*798 :T METHOD FOR MEASURING FIRMNESS WHILE SMOKING OF CIGARETTE AND  
CODE 3 :T LENGTH DURING SMOKING OF CIGARETTE/11-1-77  
:I J. NIENOW, L. SHAW, AND C. IRVING  
:C INSTRUMENT--FIRMNESS OF ROD  
:D R&D/TOBACCO SERVICES DIVISION/GANNON/OSMALOV

:A A METHOD FOR MEASURING FIRMNESS OF A CIGARETTE ROD DURING SMOKING  
:A FOR DETERMINING EFFECTS OF INCREASED MOISTURE AND TEMPERATURE ON  
:A FIRMNESS BEHIND THE COAL OF A BURNING CIGARETTE.

:S GMJS/9-27-78 DRAFT DISCLOSURE COMPLETED

\*\*801 :T AMINO ACID-SUGAR TOBACCO FLAVORANTS/11-16-77  
:I L. WU  
:C FLAVOR + SYNTHESIS  
:D R&D/FLAVOR DEVELOPMENT DIVISION/GANNON/DAYLOR

:A THE REACTION OF SUGAR, ASPARAGINE, OTHER AMINO ACIDS AND  
:A ALDEHYDES IN THE PRESENCE OF NH<sub>4</sub>OH; THE REACTION CAN BE DONE  
:A WITH OR WITHOUT ADDED HEAT. THE RESULTING PRODUCT IS USED TO  
:A IMPROVE THE FLAVOR OF LOW DELIVERY AND RL CIGARETTES.

CC :S SAH/11-78 COMMENTS ON FIRST DRAFT RECEIVED FROM INVENTOR--  
:S REVISIONS BEING MADE

\*\*802 :T DEVICE FOR MEASURING POROSITY OF PAPER/11-23-77  
:I J. WASHINGTON, G. CROWTHER, AND R. GAUDLITZ  
:C INSTRUMENT + POROSITY  
:D R&D/ENGINEERING SERVICES DIVISION/THOMSON/HUTTER

:A OPERATES OVER A WIDE RANGE OF POROSITIES BY COMPUTER  
:A MATCHING TO FIND A COMBINATION OF ORIFICES WHILE PRESSURE  
:A IS HELD

:S WLKT (TORRENTE)/GMJS/10-18-78 COMMENTS ON 1ST DRAFT SENT TO WLKT

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\*\*805 :T CONTROLLED DILUTION/11-15-77

:I F. RESNIK

:C FILTER + VENTILATED

:D NEW YORK/MISCELLANEOUS

:A POROUS TIPPING PAPER IS SIZED TO COVER A PORTION OF THE HOLES

:A LEAVING THE EXPOSED POROUS AREA AS A MEANS OF CONTROLLING THE

:A FINAL DILUTION OF THE TIPPING PAPER.

:S WLKT (KOTHE)/GMJS/TESTING IN PROGRESS TO DEVELOP DATA FOR PATENT

:S APPLICATION; 3-16-78 INFORMATION TO KOTHE ASKING FOR GENERAL

:S INFRINGEMENT STUDY; 6-19 KOTHE'S REPORT RECEIVED; PENDING

:S INSTRUCTIONS FROM RESNIK

\*\*807 :T IMPROVED FLAVOR FORMULATIONS FOR RECONSTITUTED TOBACCO/12-12-77

:I F. DAYLOR, JR., H. SPIELBERG, J. SWAIN, AND D. KEEL

:C RECONSTITUTED + ADDITIVE

:D R&D/FLAVOR DEVELOPMENT DIVISION/GANNON/DAYLOR

:A CHEMICALS ADDED TO CEL IN THE PAPER MADE RECONSTITUTED TOBACCO

:A PROCESS. RELATED PARTICULARLY TO NEW MATERIALS AND/OR

:A MIXTURES RESULTING IN SUBJECTIVE IMPROVEMENTS OVER EARLIER

:A TOBACCO RECONSTITUTED SHEET PERMITTING USE IN TOBACCO BLENDS AT

:A MUCH HIGHER LEVELS (E.G. UP TO 30%).

:S GEI/APPLICATION BEING PREPARED; FURTHER INFORMATION REQUESTED

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\*\*808 :T REDUCTION OF "NO" IN TOBACCO SMOKE AND DENITRATION OF TOBACCO  
:T 12-6-77  
:I G. KERITSIS  
:C TOBACCO TREATMENT + DENITRATION  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS

:A A PROCESS FOR THE REDUCTION OF OXIDES OF NITROGEN IN TOBACCO  
:A SMOKE IS DISCLOSED. TOBACCO WHICH HAS BEEN TREATED TO REMOVE  
:A NITRATES, AND SPECIFICALLY POTASSIUM NITRATE, IS FURTHER  
:A TREATED BY RESTORATION OF THE METALLIC CATIONS, AND ESPECIALLY  
:A POTASSIUM CATIONS TO ABOUT ITS ORIGINAL LEVEL IN THE TOBACCO,  
:A NEW AND IMPROVED TECHNIQUES FOR DENITRATING TOBACCO USING ANION  
:A EXCHANGE RESINS, IONIC MEMBRANE ELECTRODIALYSIS, ELECTRORE-  
:A GENERATING ION EXCHANGE DEIONIZATION OR DONNAN DIALYSIS ARE  
:A DISCLOSED.

:S SAH/SEARCH COMPLETED--CLOSE PRIOR ART WITH RESPECT TO ADDITION  
:S OF K+ SALTS; 6-13-78 DISCLOSURE EVALUATED--EXAMPLES REQUESTED;  
:S 7-78 REPORT RECEIVED FROM INVENTOR; 11-6-78 FIRST DRAFT BEING  
:S PREPARED

\*\*814 :T FILLER EXPANSION WITH WATER/2-6-78  
:I P. AUMENT, R. DE LA BURDE, AND F. UTSCH  
:C EXPANSION  
:D R&D/TOBACCO MATERIALS DEVELOPMENT DIVISION/GANNON/BURNS

:A PROCESS FOR INCREASING FILLING POWER OF TOBACCO WITHOUT USING  
:A FOREIGN AGENTS OR EXPENSIVE PROCESSING EQUIPMENT. STEPS  
:A INCLUDE: (1) WETTING OF TOBACCO MORE THAN WHAT IS NORMAL IN  
:A PROCESSING OF TOBACCO FOR CIGARETTES, (2) ALLOWING TOBACCO TO  
:A EQUILIBRATE, (3) RAPIDLY DRYING FILLER TO OV LEVELS BELOW 7%  
:A (PREFERABLY BELOW 3%) TO EXPAND AND STIFFEN FIBER STRUCTURE,  
:A AND (5) REMOISTURIZING THE "OVERDRIED" CUT TOBACCO TO LEVELS  
:A USEFUL FOR CONVENTIONAL CIGARETTE MAKING.

:S WLKT (KOTHE)/GEI/10-27-78 DISCLOSURE TO WLKT FOR APPLICATION  
:S PREPARATION

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**\*\*816** :T COPOLYMER POSSESSING WATER AND/OR ETHANOL SOLUBILITY FOR MAKING  
:T SMOKING COMPOSITIONS/3-2-78  
:I W. JOHNSON, JR. AND H. GRUBBS  
:C FLAVOR + RELEASE + POLYMER  
:D R&D/CHEMICAL RESEARCH DIVISION/OSDENE/JOHNSON

:A MONOMERS OF FLAVOR-RELEASE POLYMERS ARE MIXED WITH MONOMERS  
:A CONTAINING POLAR GROUPS AND COPOLYMERIZED TO GIVE A COPOLYMER  
:A WHICH POSSESSES WATER AND/OR ETHANOL SOLUBILITY. TYPICALLY THE  
:A COPOLYMERIZATIONS ARE CARRIED OUT IN BULK USING FREE RADICAL  
:A CATALYSTS. SMOKING COMPOSITIONS ARE TREATED WITH THE POLYMERS  
:A BY SPRAYING OR BY INCORPORATING IN RECONSTITUTED TOBACCO.

:S SAH/8-78 DISCUSSED WITH INVENTORS; 11-78 EXAMPLES BEING  
:S COMPLETED; TARGET FILING DATE 12-15-78

**\*\*819** :T CELLULOSE TREATMENT OF BRIGHT FILLER TO FACILITATE INCREASED  
FILED :T CV OF BOTH ITS EXPANDED AND UNEXPANDED FORMS/3-9-78  
:I B. SEMP AND D. TENG  
:C TOBACCO TREATMENT + MICROORGANISM  
:D R&D/BIO MATERIALS SCIENCE GROUP/FARONE/TENG

:A A PROCESS FOR ACHIEVING INCREASED CYLINDER VOLUME (OR GREATER  
:A FILLING POWER) OF TREATED TOBACCO MATERIAL AFTER EXPANSION USING  
:A THE DIET PROCESS OR ANY OTHER EXPANSION PROCESS. THE PROCESS  
:A ENTAILS THE SPRAYING OR DIPPING OF TOBACCO MATERIAL WITH OR IN A  
:A SOLUTION OF T. VIRIDE CELLULOSE CULTURE BROTH, SUITABLE INCUBA-  
:A TION, AND DRYING PRIOR TO EXPANSION. RESULTS THUS FAR INDICATE  
:A THAT BY USAGE OF THIS PROCESS, AN EXPANDED PRODUCT WILL INCREASE  
:A IN CV 12.8% OVER AN UNTREATED EXPANDED PRODUCT.

:S SAH/9-20-78 FILED IN PTO

**\*\*821** :T ORIENTAL LEAF PAD SEPARATOR "SYSTEM"/3-17-78  
:I R. THATCHER  
:C MECHANICAL + SEPARATOR  
:D MANUFACTURING ENGINEERING/PASQUINE

:A MODIFICATION TO TORUS FAN ALLOWS LIGHT LAMINAR AND LEAF TO  
:A FOLLOW THE VIOLENT AIR PATH WHILE HEAVY PADS STRIKE THE TORUS  
:A FAN IMPELLOR AND BREAK UP. THIS IS THE THIRD USE OF THE  
:A TORUS FAN PRINCIPLE, EACH VARYING IN END USE HAVING SPECIFIC  
:A MODIFICATION ALLOWING DIFFERENT END RESULTS.

:S WLKT (BRANDT)/GMJS/SEE ALSO PM 782 AND 778; BEING STUDIED

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\*\*\*823 :T CHARCOAL APPLICATOR FOR FILTER MAKING MACHINES/3-17-78  
:I R. BRINKER  
:C MECHANICAL  
:D MANUFACTURING ENGINEERING/PASQUINE  
  
:A DESIGNED TO PLACE PREMEASURED CHARCOAL GRANULES ONTO FILTER TOW  
:A WITH MINIMUM LOSS AND MORE UNIFORM DISTRIBUTION.  
  
:S WLKT (BRANDT)/GMJS/11-3-78 DISCLOSURE HANDED TO BRANDT FOR  
:S APPLICATION PREPARATION

\*\*\*824 :T FILTER PAPER STRIPPING DEVICE/3-17-78  
:I R. BRINKER AND W. HAMILTON  
:C FILTER  
:D MANUFACTURING ENGINEERING/PASQUINE  
  
:A DESIGNED TO REMOVE PAPER, NEEDED TO CURE TRIACETIN, FROM FILTER.  
  
:S WLKT (BRANDT)/GMJS/11-7-78 DISCLOSURE HANDED TO BRANDT FOR  
:S APPLICATION PREPARATION

\*\*\*828 :T USE OF ALKYLPIRAZINE-CARBONYL ADDUCTS AS FLAVORANTS ON TOBACCO  
:T 4-20-78  
:I Y. HOUMINER AND E. SANDERS  
:C FLAVOR  
:D R&D/CHEMICAL RESEARCH DIVISION/OSDENE/JOHNSON  
  
:A REACTION OF ALKYLPIRAZINES WITH A CARBONYL COMPOUND IN THE  
:A PRESENCE OF A STRONG BASE GIVES RISE TO CONDENSATION PRODUCTS.  
:A ADDITION OF SUCH COMPOUNDS TO TOBACCO HAS A MARKED EFFECT,  
:A PARTICULARLY IMPROVING BOTH THE IMPACT AND TOBACCO TASTE OF LOW  
:A DELIVERY CIGARETTES.  
  
:S D&O/SAH/11-20-78 CORRECTIONS AND ADDITIONAL EXAMPLES FOR FIRST  
:S DRAFT SENT TO D&O

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**\*\*832** :T INCREASING THE FILLING POWER OF RECONSTITUTED TOBACCO MATERIAL  
 :T BY HEAT TREATMENT/5-15-78  
 :I J. BANYASZ  
 :C RECONSTITUTED  
 :D R&D/BIOMATERIALS SCIENCE GROUP/FARONE/HOELZEL  
  
 :A TWO-STEP PROCESS TO INCREASE THE FILLING POWER OF RECONSTITUTED  
 :A TOBACCO. MOISTURE CONTENT OF MATERIAL IS RAISED TO A HIGH VALUE,  
 :A E.G. 40%. THE MOISTURE CONTENT MAY BE LOWER BUT OPTIMAL RESULTS  
 :A ARE OBTAINED AT THE HIGHER LEVELS. THE MATERIAL IS THEN HEATED  
 :A IN AN OVEN FOR SEVERAL HOURS.  
  
 :S WLKT (KOTHE)/GEI/11-10-78 DISCLOSURE SENT TO WLKT FOR APPLICATION  
 :S PREPARATION

**\*\*838** :T IMPROVED PROCESS FOR MICROBIAL NITRATE REMOVAL FROM TOBACCO  
 :T MATERIALS BY DISSIMILATORY DENITRIFICATION/6-2-78  
 :I B. SEMP AND D. TENG  
 :C TOBACCO TREATMENT + MICROORGANISMS  
 :D R&D/BIOMATERIALS SCIENCE GROUP/FARONE/TENG  
  
 :A IMPROVEMENT OVER USSN 900044/PM 810  
  
 :S SAH/6-2-78 FIRST DRAFT COMPLETED--TO INVENTORS; AWAITING  
 :S COMMENTS ETC. FROM INVENTORS

**\*\*841** :T VARIABLE AREA ZONE SEPARATOR/7-10-78  
 :I R. THATCHER, H. ODOM, AND R. EDWARDS  
 :C MECHANICAL + SEPARATOR  
 :D MANUFACTURING ENGINEERING/PASQUINE  
  
 :A OBJECT OF THE INVENTION IS TO SEPARATE TOBACCO PRODUCT, I.E.,  
 :A WINNOW PRODUCT, LEAF AND STEM, CHARCOAL AND TOBACCO.  
  
 :S WLKT (BRANDT)/GMJS/11-3-78 DISCLOSURE SENT TO WLKT FOR  
 :S APPLICATION PREPARATION; STILL IN DEVELOPMENT

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**\*\*845** :T QUICK RELEASE SPINDLE - UNWIND AND REWIND/8-21-78  
**FILED** :I R. RAYNOR AND W. HARDESTY  
:C MECHANICAL  
:D MANUFACTURING ENGINEERING/PASQUINE  
  
:A OBJECT IS TO SAVE OPERATOR TIME WHEN CHANGING PAPER BOBBINS,  
:A THUS MAKING A MORE EFFICIENT OPERATION.  
  
:S WLKT(BRANDT)/GMJS/11-10-78 EXECUTED & RETURNED TO WLKT FOR FILING

**\*\*852** :T INSERTER/3-78  
:I P. MASSELIN AND K. WIELAND  
:C MECHANICAL  
:D MANUFACTURING ENGINEERING/PASQUINE  
  
:A OBJECT OF THE INVENTION IS TO INSERT COUPONS, ADVERTISEMENTS,  
:A ETC. INTO A CARTON OF CIGARETTES JUST PRIOR TO THE CARTON BEING  
:A FORMED.  
  
:S WLKT (BRANDT)/GMJS/11-7-78 DISCLOSURE HANDED TO BRANDT  
:S FOR APPLICATION PREPARATION

**\*\*854** :T TORUS INJECTION ZONE SEPARATOR/3-78  
:I R. THATCHER, H. ODOM, AND R. EDWARDS  
:C MECHANICAL + SEPARATOR  
:D MANUFACTURING ENGINEERING/PASQUINE  
  
:A TORUS FAN USED FOR CIGARETTE RIPPER PAD SEPARATION AND PNEUMATIC  
:A CONVEYING TO PROVIDE AN IMPROVED METHOD OF TOBACCO LEAF LAMINAR,  
:A LAMINAR AND STEM, AND STEM SEPARATION USING THE LOWEST ENERGY  
:A REQUIRED AND TO IMPROVE EQUIPMENT EFFICIENCY.  
  
:S WLKT (BRANDT)/GMJS/11-3-78 DISCLOSURE SENT TO WLKT FOR  
:S APPLICATION PREPARATION; STILL IN DEVELOPMENT

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